DOCUMENT RESUME

ED 290 265 EC 201 727

AUTHOR Hegwer, Marie; And Others
TITLE Social Skills Development and Microcomputer Use for Handicapped Adolescents.
PUB DATE Oct 86
NOTE 18p.; In: Murphy, Harry J., Ed.; Computer Technology/Special Education/Rehabilitation: Proceedings of the Conference (Northridge, CA, October 16-18, 1986); see EC 201 720.
PUB TYPE Speeches/Conference Papers (150) -- Guides - Classroom Use - Guides (For Teachers) (052)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Adolescents; *Behavior Patterns; Case Studies; Computer Literacy; Computer Uses in Education; Development; *Emotional Disturbances; *Interpersonal Competence; *Microcomputers; Secondary Education; *Time on Task

ABSTRACT

An 8-week observational study of the behavior, on and off the computer, of a class of seriously emotionally disturbed adolescents was performed. In addition, an in-depth case study of a single student revealed that the student was able to maintain the most on-task behavior when paired with another student on a computer activity. Analysis of the target student's social behavior suggested three issues to consider when using the microcomputer to develop social interaction skills: (1) physical/environmental factors; (2) self-concerns, such as knowledge, behavior, and growth and development; and (3) interaction issues. Three appendixes include information on software and books useful for developing social skills. (CL)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED290265

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
☑ This document has been reproduced as received from the person or organization originating it
☐ Minor changes have been made to improve reproduction quality
• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy

Social Skills Development And Microcomputer Use : For Handicapped Adolescents

Marie Hegwer
California High School
Whittier, California

Kathleen Harris and M. Diane Klein
California State University, Los Angeles
Los Angeles, California

BEST COPY AVAILABLE

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Harry Murphy

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

EC 201727

Abstract

Using microcomputers to develop social skills has not been widely addressed by special educators. The impetus for the suggestions presented in this paper was an eight week observational study of the behavior, on and off the computer, of a class of seriously emotionally disturbed (SED) adolescents. An in-depth case study of one student in the class revealed that the student was able to maintain the most on-task behavior when paired with another student on a computer activity. Further analysis of the social behavior of the target student suggested three issues to consider when using the microcomputer to develop social interaction skills.

First, by virtue of its characteristics, the computer can provide a unique situation around which social/communication behavior can occur. Second, software could be used in many different ways to facilitate social interaction. Third, the roles an individual plays in an interaction involving a computer can be influential in the development of social skills.

Based on these identified issues, an initial conceptualization of a social skills curriculum, utilizing the microcomputer, is presented. This curriculum addresses the following areas: physical/environmental factors, self-concept, and interaction. It is recognized that each area requires modification for different goals and different classrooms.

Microcomputers have been incorporated into many special education activities, both within and outside the classroom. Within the classroom, special education teachers have been using microcomputers in the following ways: to teach computer literacy to handicapped

students, to reinforce basic skills, to teach writing, and to develop logical thought processes. Though the behavior of handicapped students, when engaged in these activities, if often reported (e.g. students behave appropriately or display a positive attitude when using the microcomputer), few special educators have directly addressed the use of a microcomputer to develop the social skills of handicapped adolescents.

The following suggestions for developing social skills using microcomputers were originally developed from an eight week study of a high school program for seriously emotionally disturbed (SED) students. At that time, the class consisted of eight students, ranging in age from 15 to 22 years; one teacher; two aides, and one to two observers. There was one Apple IIe computer in the classroom which was used to strengthen student's basic skills as well as reinforce appropriate behavior (e.g. students could play computer games when tasks were completed).

The special education teacher was interested in obtaining information which would describe the social behavior of students in this class when on and off the computer. Videotapes were made to students in the SED class when engaged in the following situations: working independently on and off the computer, working with a nonhandicapped peer on and off the computer, working with a handicapped peer, working with the teacher, and playing a game on and off the computer. A case study approach was used in analyzing the videotapes of one student. The focal student, Theresa, was 20 years old, read at a first grade level with good oral language comprehension, and was able to follow directions. However, Theresa was hard to motivate, did

not visually complete tasks, was a "busybody" and tended to lack courtesy.

In addition to videotape information, additional information, obtained through field observation of the program and teacher's comments regarding program goals and individual student performance, was used in the analysis. The results and conclusions of this analysis were the foundation for the development of a social skills curriculum utilizing microcomputers.

Initial inspection of Theresa's on-task behavior yielded the results found in Table 1.

Table 1
Theresa's On-/And Off-Task Behavior

	On-Task (Duration)	Off-Task (Duration)	Off-Task (Frequency)
Computer	94.9%	5.1%	$\bar{x}$ = 14.4
vs.			
Noncomputer	81.75%	18.25%	$\bar{x}$ = 11.86
Independent	76%	24%	$\bar{x}$ = 21
vs.			
Paired	98%	2%	$\bar{x}$ = 4.83
Computer Paired	98%	2%	$\bar{x}$ = 4.67
vs.			
Noncomputer Paired	98%	2%	$\bar{x}$ = 5
Noncomputer Team	98%	2%	$\bar{x}$ = 5
vs.			
Noncompter Parallel	69%	31%	$\bar{x}$ = 18.33

The results reported in Table 1 suggested that more time spent on-task than off-task when Theresa was working with the computer. However, Theresa maintained at least 80% behavior whether on or off the computer. When the on-task behavior of paired activities was compared to the on-task behavior of independent activities, Thereas's

on-task behavior when paired with another individual greatly exceeded her on-task behavior when working independently. This increased on-task behavior was more evident when Theresa was working on the same task as the other individual (i.e. teamed) than when she was working on an individual assignment but placed in close proximity to another individual (i.e. parallel).

These initial findings suggested a further qualitative analysis of Theresa's behavior. This qualitative analysis led to the following general questions and comments:

Is she less likely to attend to other people, noises, etc. when on computer?

To what extent do the positive aspects of computer (reinforcement, motivation, success, external structure, non-human) create an atmosphere facilitating social interaction?

Is the computer perceived as fun; does that facilitate its use?

Is the monitor a <u>focus</u> of activity; is that a facilitating characteristic?

In a setting when the instructional goal is social interaction, what <u>is</u> off-task behavior?

Is there a point at which on-task behavior is inappropriate?

Is it normal to look ahead at how much unpleasant work remains?!

Is it a measure of SEDness how these students do totally unacceptable behavior right smack in front of a camera?????

It is a problem in SED class of not having appropriate, responsive language/pragmatics models?

Note absence of arguments in unsupervised activity.

What effect is substitute teacher on behavior?

What factors characterize "interaction" beyond that of speech itself?

Is "shut up" used as an all-purpose communication?

Data may show here better when paired but I suspect it is specific to the person with whom she is paired (none of these people were strangers).

Remember comments here may not/and probably do not generalize.

To what extent can peculiar behavior be matched to job requirements?

i.e. BH <u>always</u> smiling & happy; fast food boss loves it

T seldom overtly happy; fast food boss concerned

MK rigidly neutral; janitor boss says he's industrious & concentrating

From the analysis, three issues were identified. First, the computer itself presents a unique situation in a classroom environment. It is tangible, provides a visual focus, is easy to manipulate, is interactive, and enables the student to produce an effect, whether or not the student knows the correct response. These characteristics promote the student's ability to initiate and respond and

enhance the motivational value of the situation. As such, the potential of the situation for social interaction is even more unique.

Software can be used in many different ways to facilitate social interactions. In many instances, software is best used educationally in ways other than those of its original design. In educational uses of software for the development of social interactions, such variance is even more common. For example, a program intended for peer competition can be used by two students teamed against the computer. Or, an individual tutorial program may be better used as a foundation for teacher-student interaction. Or, groups of students can use a program designed for use by individuals. Many such examples could be given. The point is that the intent of a software designer or instruction manual may not facilitate social interaction for every individual in every classroom but, the software can often be used to facilitate social interaction.

Finally, the nature of the roles in an interaction appears to be very significant. The special education adolescent working on one program may be a cohort, a competitor, a tutee, or a tutor. Experience in each role is useful and can be provided across many types of software and in many types of situations. Selection and/or training of non-handicapped peers to fill a variety of roles is important. The perceived status level of such peers must be taken in account. Also, non-handicapped peers are more likely to model desired language and social skills. Attention must be given to those and other such issues in structuring a situation which facilitates the development of social interaction skills.

The following represents an initial conceptualization of the key components of a social skills curriculum using microcomputers. The areas of physical/environmental factors, self-concept and interaction are addressed. Each are requires modification for different goals and different classrooms. These factors function in their own complex interaction and must be taken into consideration in determining current status and future planning.

The following position is taken: social development, especially in an SED class, is extremely important and also pervades all other areas of development. Ultimately, all instructional goals are intended to maximize the individual's socialization. Social interaction occur in all domains and across all curricular content areas.

1. Physical/environmental

In developing social skills, it appears that there are few absolutes across groups or an individual. There may be several factors which affect the utilization of social skills in a given situation. To some extent, perhaps these factors can be manipulated instructionally, enabling students to progress through and/or practice skills in these different settings. It may also be possible for students to become aware of the variations in factors which facilitate or impede the utilization of their skills. Perhaps a given student could then modify the setting or utilize compensatory skills.

1.1 Overall Issues

1. Safety
2. Motivation -- to participate or avoid
3. Familiarity -- strangeness or known

4. Comfort -- physical & emotional

5. Physical proximity -- to people or things

6. Distraction -- stimuli values; activities, people, home

1.2 On Computer

1. Focal point -- utilize stimuli value, novelty

2. Activity -- teamed or competitive

3. Content -- academic, leisure...

4. Partner selection

-- self

-- teacher: known, unknown; like, dislike; ability...

1.3 Off Computer

1. Activity

2. Content

3. Partner

2. Self

Each individual has certain existing characteristics which must be considered in future developing social skills. These characteristics must be assessed. The individuals should gain awareness of their skills and needs.

It is assumed that an individual's self-concept and self-awareness will affect interactions. Again, these skills probably operate in a complex relationship. Roughly, an improvement in self-concept should improve social interactions and enhanced interaction skills should improve self-concept.

Perhaps instruction can then be used in an attempt to modify some personal characteristics, to identify tasks or

settings which can be accommodated to the person, to develop compensatory skills, and/or some combination maximizing social development and utilization or social skills.

Through the curricular/instructional process, staff are continually seeking to maximize social skill development in a specific setting and to create generalization to all settings, activities, language, prompts, and cohorts/audience.

2.1 Knowledge/awareness -- level and realism

1. Self
    a. Skills
    b. Needs
    c. Compensation
2. Environment
    a. Surroundings
    b. Interactions
    c. Activity

2.2 Behavior

1. Control
2. Responsiveness/receptivity
3. Communication

2.3 Growth and development

1. Motivation
2. Comfort
3. Generalization

3. Interaction

Instructionally, the assumption is that social development may be improved or facilitated through "interactions" with

oneself, a computer, the teacher, and other students. There are many factors to consider in each of these areas.

3.1 Factors

Each factor represents a continuum or range of possible intensities/situations. Perhaps at first it would be useful to determine the optimal comfort levels for the student and use that information to structure initial situations. Then, factors may be slowly altered and/or recombined to facilitate generalization and ease in additional situations to eventually broaden the student's comfort range.

1. Supervision: directed ... undirected
2. Process: structured ... unstructured
3. Who: machine ... staff ... peer ... stranger
4. Domain: home ... school ... community ... vocational
5. Role: observer ... cohort ... competitor

3.2 Situations

There may be different reactions from different students in different situations. Perhaps the student again may be guided from comfortable situations slowly to gain comfort in other situations through use of the computer. Of course, in each situation there are many factors to consider and each factor would have various dimensions and intensities. This outline is intended only as a framework for further development. It is assumed that off-computer situations are beyond the scope of this paper.

3.2.1 Interactions with self

awareness	planning
communications	self improvement
motivation	interest
self control	leisure

3.2.2 Interactions with computer

3.2.2.1 Input/output modalities

3.2.2.2 Software

3.2.2.2.1 Characteristics

patience	reinforcement
feedback	appeal
speed	language

3.2.2.2.2 Goal

give & take	waiting
opinions	feedback
novelty	pressure

3.2.2.2.3 Process

selection	ordering
compare scores	

3.2.2.2.4 Type

drill	game
simulation	tutorial
utility	

3.2.3 Interactions with teacher in computer situation

3.3.3.1 Indirect interaction by teacher selection of software

scheduling of use

record keeping

set-up

3.2.3.2 Direct interaction by teacher

passive

slowly increase physical proximity

comment/question - no s response

reinforce, parallel to computer

active

work/play with

question/answer

team member, cohort

planning

3.2.4 Interactions with peer in computer situations

3.2.4.1 Format

one-on-one: Parallel ... teamed

small group

3.2.4.2 Role

peer: cohort ... competitor

tutor: access ... read ... assist

3.2.4.3 Who

age

gender

NH?

3.2.4.4 Content

academic ... leisure

software selection

3.2.4.5 Location

familiar ... unfamiliar

3.2.4.6 Structure

provided ... open

3.2.5 Interactions with teacher off computer

3.2.6 Interactions with peers off computer

Three appendicies have been included to provide additional resources for educators who wish to develop the social skills of handicapped adolescents. Appendix A provides examples of software useful for developing social skills. Appendix B lists related materials and publishers. Appendix C provides a listing of books useful in the development of social skills.

Appendix A

Software

The following software are intended as examples; certainly other appropriate software exists. While perhaps not commonly considered as such, these programs can be very useful in the adolescent special education class for the development of social interaction skills. The teacher should manipulate roles, stated goals, and other factors as needed to appropriately structure the situation.

Scholastic	Microzine (assorted volumes)
Sierra On-Line	Dragon's Keep
	Troll's Tale
MECC	Word Munchers
	Oregon Trail
	Elementary Volume 7

Broderbund	Where in the World is Carmen San Diege
	Print Shop
Tom Synder	The Other Side
Ginn	Suspect Sentences
DC Heath	A Survey Kit
Hartley	Memory Match
CBS	Murder by the Dozen
Springboard	Certificate Maker
Grolier	Treasure Hunter
	Science Island
Advance Ideas	Game Show
	Tic Tac Show
Davidson	Grammar Gremlins
Action Craft	Pick-A-Dilly Pairs

Appendix B

Related Materials -- Publishers

These non-electric materials may be useful in augmenting a social interaction curriculum. Many are available at local educational supply houses. Generally, these materials help a teacher to structure enjoyable and pragmatic interactional situations.

Educational Apple-cations	Mary Male book
194 Wedgewood Ave.	($17.95)
Los Gatos, CA 95030	
Educational Insights	Values
Compton, CA	Write In! Vol. I, II, III

Good Apple Box 299 Carthage, IL 62321	Feelings
Hoyle Products (@ local game store)	Pocket Principles
Lingui Systems 716 17th Street Moline, IL 61265	Encounters: Solving Communication Problem in Adult Situations Communication Workshop Situational Language Manual of Exercises for Expressive Reasoning
Merrill Pub. Columbus, OH 43216	Let's Talk--Developing Prosocial Communicating Skills (by E. H. Wigg) Referential Communication
Thinking Publications 10 Platt St. P.O. Box 163 Eau Claire, WI 54702-0163	Breakaway Problem Solver Communicate Scripting: Social Communication for Adolescents
Think Ink Pub. 3421 N. 44th St. Phoenix, AZ 85018	Simulations

Appendix C

Related Books

Beach, D.M., Reaching Teenagers: Learning centers for the secondary classroom.

Bee, C.P., Secondary Learning Centers: An innovative approach to individualized instruction.

Bender, M., & Valletutti, P.J., Teaching Functional Academics: A curriculum guide for adolescents and adults with learning problems.

DeMille, R., Put Your Mother On The Ceiling: Children's imagination games.

Goldstein, A.P., Sprafkin, R.P., Gershaw, N.J., & Klein, P., Skill streaming The Adolescents: A structured learning approach to teaching prosocial skills.

Hendricks, G., & Roberts, T.B., The Second Centering Book: More awareness activities for children, parents, and teachers.

Hendricks, G., & Wills, R., The Centering Book.

Hoffman, J., Critical Incidents.

Howe, L.W., & How, M.M., Personalizing Education: Values Clarification and beyond.

Kaplan, P.G., Crawford, S.K., & Nelson, S.L., Nice: Nifity innovations for creative expression.

Maid, A., & Wallace, R., Not Just Schoolwork: New directions in written expression.

Male, M., Johnson, R., Johnson, D., & Anderson, M., Cooperative Learning And Computer: An activity gudide for teachers.

Schrank, J., Teaching Human Beings: 101 subversive activities for the classroom.

Simon, S., Hawley, R.C., & Britton, D.B., Composition For Personal Growth: Values clarification through writing.

Simon, S.B., Howe, L.W., & Kirschenbaum, H., Values Clarification: A handbook of practical strategies for teachers and students.

Stevens, J.O., Awareness: Exploration, experimenting, experiencing.

Taylor, J., & Walford, R., Learning And The Simulation Game.

Wagner, G., Gilloley, L., Social Studies Games and Activities: Strengthening social studies skills with instructional aids.